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Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/BTR/W.No.13/CSR.7/867f/CEMENT/2015-16

Date: 08.07.2015

TEST REPORT ON CEMENT

*** CUSTOMER**	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
***AGENCY**	:	**Mr. B.T. Ravikumar,** No.180, 3rd Main, H.V.R. Layout, Magadi Road, Bangalore – 560 079.
***NAME OF THE WORK**	:	Improvements to Roads and drains in Shooting Bunglow road in Ward No.13 in SSD, BBMP, Bangalore.
REFERENCE	:	BBMP/AEE/SSD/DZ/PR/2015-16 Dated: 06.07.2015
SAMPLE ID	:	Cement
SAMPLE RECEIVED ON	:	06.07.2015
PERIOD OF TESTING	:	06.07.2015 to 08.07.2015

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988(RA-2009)	27.50 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988(RA-2009)	130 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988(RA-2009)	485 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988(RA-2009)	1 mm	Not more than 10mm

*Information is furnished by the Customer/Representative.

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ಟಿಸಿ.ಎಂ ರಸ್ತೆ, ರವೀಂದ್ರನಗರ, ಬೆಂಗಳೂರು.

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Job No.: CTCE/BBMP/BTR/W.No.13/CSR.7/867f/SAND-Gradation/2015-16 : 08.07.2015

TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. B.T. Ravikumar,**
No.180, 3rd Main, H.V.R. Layout, Magadi Road, Bangalore – 560 079.

*** Name of Work** : Improvements to Roads and drains in Shooting Bunglow road in Ward No.13 in SSD, BBMP, Bangalore.

Reference : BBMP/AEE/SSD/DZ/PR/2015-16 Dated: 06.07.2015

Technical Reference : IS : 2386 Part 1 - 1963 RA-2007

Sample ID : Fine Aggregates

Sample Received on : 06.07.2015

Date of Testing : 08.07.2015

Total Wt. of Aggregates in gms **1000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	94.64	90-100	90-100	90-100	95-100
2.36	81.90	60-95	75-100	85-100	95-100
1.18	56.01	30-70	55-90	75-100	90-100
600 Micron	23.66	15-34	35-59	60-79	80-100
300 Micron	8.03	5-20	8-30	12-40	15-50
150 Micron	2.28	0-10	0-10	0-10	0-15

* Information is furnished by the Customer/Representative

Remarks : This sample is under Zone-I specific limits.

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Job No.: CTCE/BBMP/BTR/W.No.13/CSR.7/867f/AGG/GR/2015-16 : 08.07.2015

TEST REPORT ON DETERMINATION GRADATION OF COARSE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. B.T. Ravikumar,**
No.180, 3rd Main, H.V.R. Layout, Magadi Road, Bangalore – 560 079.

*** Name of Work** : Improvements to Roads and drains in Shooting Bunglow road in Ward No.13 in SSD, BBMP, Bangalore.

Reference : BBMP/AEE/SSD/DZ/PR/2015-16 Dated: 06.07.2015

Technical Reference : IS : 2386 Part 1 -1963 RA-2007

Sample ID : Coarse Aggregates (40mm)

Sample Received on : 06.07.2015

Date of Testing : 08.07.2015

Total Wt. of Aggregates in gms= **10000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	96.95	95-100	85-100
20	45.75	30-70	0-20
10	21.90	10-35	0-5
4.75	2.30	0-5	-

* Information is furnished by the Customer/Representative

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Remarks : This sample is under graded specific limits.

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Job No.: CTCE/BBMP/BTR/W.No.13/CSR.7/867f/CC Solid Block/2015-16 : 13.07.2015

TEST REPORT ON SOLID CONCRETE BLOCKS

* Customer	: **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
* Agency	: **Mr. B.T. Ravikumar,** No.180, 3rd Main, H.V.R. Layout, Magadi Road, Bangalore – 560 079.
* Name of the Work	: Improvements to Roads and drains in Shooting Bunglow road in Ward No.13 in SSD, BBMP, Bangalore.
Reference	: BBMP/AEE/SSD/DZ/PR/2015-16 Dated: 06.07.2015
Sample Received on	: 06.07.2015
Date of Testing	: 13.07.2015
Size of Blocks	: 400mm x 200mm x 200mm
Cross Sectional Area	: 80000 mm^2
Technical Reference	: IS: 2185 (Part 1) - 2005
No. of Blocks Tested	: 08

Sl.No.	Block ID	Wt. in Kg	Failure load (KN)	Compressive strength (N/mm^2)	Requirement as per IS 2185 (Part 1) - 2005
1	Block 1	36.23	263.5	3.29	Minimum required Compressive Strength of Individual Units 3.20 N/mm^2
2	Block 2	35.47	264.7	3.31	
3	Block 3	35.96	263.4	3.29	
4	Block 4	36.58	262.5	3.28	
5	Block 5	34.85	260.9	3.26	
6	Block 6	34.97	261.3	3.27	
7	Block 7	36.47	262.8	3.29	
8	Block 8	35.28	263.2	3.29	

*Information is furnished by the Customer/Representative.

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Job No.: CTCE/BBMP/BTR/W.No.13/CSR.7/867f/CC Solid Block/2015-16 : 13.07.2015

TEST REPORT ON SOLID CONCRETE BLOCKS

* Customer	: **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
* Agency	: **Mr. B.T. Ravikumar,** No.180, 3rd Main, H.V.R. Layout, Magadi Road, Bangalore – 560 079.
* Name of the Work	: Improvements to Roads and drains in Shooting Bunglow road in Ward No.13 in SSD, BBMP, Bangalore.
* Reference	: BBMP/AEE/SSD/DZ/PR/2015-16 Dated: 06.07.2015
Sample Received on	: 06.07.2015
Date of Testing	: 13.07.2015
Size of Blocks	: 400mm x 150mm x 200mm
Cross Sectional Area	: 60000 mm^2
Technical Reference	: IS: 2185 (Part 1) - 2005
No. of Blocks Tested	: 08

Sl.No.	Block ID	Wt. in Kg	Failure load (KN)	Compressive strength (N/mm^2)	Requirement as per IS 2185 (Part 1) - 2005
1	Block 1	24.56	193.2	3.22	
2	Block 2	26.58	194.7	3.25	
3	Block 3	25.47	192.6	3.21	
4	Block 4	25.12	195.8	3.26	Minimum required Compressive Strength of Individual Units 3.20 N/mm^2
5	Block 5	24.63	194.3	3.24	
6	Block 6	26.35	197.4	3.29	
7	Block 7	25.87	193.3	3.22	
8	Block 8	24.12	195.7	3.26	

*Information is furnished by the Customer/Representative.

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ಆರ್.ಎಂ.ವಿ. ೨ನೇ ಹಂತ, ಶಕ್ತಿಗಣಪತಿನಗರ, ಬೆಂಗಳೂರು.

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Job No.: CTCE/BBMP/BTR/W.No.13/CSR.7/867f/CUBE/2015-16 27.08.2015

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

*** Customer** : **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. B.T. Ravikumar,**
No.180, 3rd Main, H.V.R. Layout, Magadi Road, Bangalore – 560 079.

*** Name of the work** : Improvements to Roads and drains in Shooting Bunglow road in Ward No.13 in SSD, BBMP, Bangalore.

*** Reference** : BBMP/AEE/SSD/DZ/PR/2015-16 Dated: 06.07.2015

*** Sample ID** : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

*** Grade of Concrete** : M_{15}

Compressive Strength as o : 28^{th} day

Sample Received on : 30.07.2015

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	30.07.2015	27.08.2015	8.196	364.8	16.21
2	30.07.2015	27.08.2015	8.287	372.5	16.56
3	30.07.2015	27.08.2015	8.352	389.3	17.30

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Job No.: CTCE/BBMP/BTR/W.No.13/CSR.7/867f/Pre slab/2015-16

05.08.2015

TEST REPORT ON CONCRETE CORE (PRECAST SLAB)

* Name of Client	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
* Name of Agency	:	**Mr. B.T. Ravikumar,** No.180, 3rd Main, H.V.R. Layout, Magadi Road, Bangalore – 560 079.
* Name of work	:	Improvements to Roads and drains in Shooting Bunglow road in Ward No.13 in SSD, BBMP, Bangalore.
Referece	:	BBMP/AEE/SSD/DZ/PR/2015-16 Dated: 06.07.2015
Techinical Reference	:	IS:516-1959 (Reaffirmed 2008), SP-24:1983.
Sample ID	:	Precast Slab
Sample received on	:	01.08.2015
Date of Testing	:	05.08.2015
Grade of Concrete	:	M_{20}

Sl. No.	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m^3)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm^2)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm^2)	Equivalent Cube Compressive Strength (N/mm^2)
1	50.00	82.00	0.406	2521.64	1.64	0.965	33.45	17.04	18.40	17.75	22.19
2	50.00	80.00	0.397	2527.38	1.60	0.960	32.95	16.78	18.12	17.40	21.75
3	50.00	77.00	0.382	2526.64	1.54	0.955	32.60	16.60	17.93	17.12	21.41

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